

CLAIMS:

- 1) An optical transmission apparatus including a port for connection to an optical fiber for releasing non-visible laser light for transmission through the optical fiber,
5 said optical transmission apparatus including a visible light generator optically coupled to said port for releasing at said port a visible light tracer for propagation in the optical fiber with the non-visible laser light, wherein said visible light generator
10 modulates at least one aspect of the visible light tracer when at least one predetermined non-visible laser light transmission condition in the optical fiber is met.
- 2) An optical transmission apparatus as defined in claim
15 1, wherein said visible light generator modulates an intensity of the visible light tracer.
- 3) An optical transmission apparatus as defined in claim
1, wherein said visible light generator modulates a color
20 of the visible light tracer.
- 4) An optical transmission apparatus as defined in claim
1, wherein said predetermined non-visible laser light transmission condition is a transition from absence of
25 non-visible laser light in the optical fiber to presence of non-visible laser light in the optical fiber.
- 5) An optical transmission apparatus as defined in claim
1, wherein said predetermined non-visible laser light transmission condition is a transition from a first power
30 level of the non-visible laser light to a second power level of the non-visible laser light.
- 6) An optical transmission apparatus as in claim 1,
35 comprising a non-visible laser light generator for generating the non-visible laser light, said non-visible

laser light generator being optically coupled to said port.

7) An optical transmission apparatus as defined in claim 5, wherein said non-visible laser light generator is a Raman pump laser light generator.

8) An optical transmission apparatus as defined in claim 6, wherein said non-visible laser light generator is an 10 amplifier producing a non-visible signal laser light.

9) An optical transmission apparatus as defined in claim 1 wherein the visible light tracer carries a machine-readable signal.

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10) A laser light monitor, comprising:

a) an input for receiving a control signal indicating the occurrence of at least one predetermined non-visible laser light transmission condition in an optical 20 fiber;

b) a visible light generator coupled to said input to modulate at least one aspect of a visible light tracer in response to the control signal;

c) a coupler including a first input coupled to said 25 visible light generator for receiving the visible light tracer and a second input coupled to the optical fiber for receiving the non-visible laser light, said coupler further including an output, said coupler being operative to combine the visual light tracer and 30 the non-visible laser light into a combined radiation stream and release the combined radiation stream at said output.

11) A laser light monitor as defined in claim 10, wherein 35 said visible light generator modulates an intensity of the visible light tracer.

12) A laser light monitor as defined in claim 10, wherein
said visible light generator modulates a color of the
visible light tracer.

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13) A laser light monitor as defined in claim 10, wherein
the predetermined non-visible laser light transmission
condition is a transition from absence of non-visible
laser light in the optical fiber to presence of non-
10 visible laser light in the optical fiber.

14) A laser light monitor as defined in claim 10, wherein
the predetermined non-visible laser light transmission
condition is a transition from a first power level of the
15 non-visible laser light to a second power level of the
non-visible laser light.

15) A laser light monitor as defined in claim 10
comprising a detector for sensing the non-visible laser
20 light in the optical fiber and generating an electrical
control signal, said detector including an output for
releasing the electrical control signal to said visible
light generator.

25 16) An optical fiber transmitting simultaneously a non-
visible laser light and a visible light tracer, wherein
the non-visible laser light includes Raman pump laser
light.

30 17) An optical transmission apparatus, comprising:

- a) a port for conveying light, the light including non-
visible laser light and a visible light tracer;
- b) a visible light generator for producing the visible
light tracer, said visible light generator being
35 optically coupled to said port for transmitting the
visible light tracer to said port;

c) an indicator optically coupled to said visible light generator, the indicator glowing when the visible light tracer is produced by said visible light generator.